

WALKERTON BRIDGE
Spanning the Mattaponi River at State Route 629
Walkerton Vicinity
King and Queen County
Virginia

HAER No. VA-62

HAER
VA
49-WALKTV,
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Northeast Region
U.S. Custom House
200 Chestnut Street
Philadelphia, PA 19106

HISTORIC AMERICAN ENGINEERING RECORD
WALKERTON BRIDGE HAER NO. VA-62

HAER
VA
49-WALKERTON
1-

Location: Spanning the Mattaponi River on State Route 629, connecting King and Queen County with King William County, Virginia and located just south of the town of Walkerton, King and Queen County, Virginia.

UTM: 18.351520.4176820
QUAD: King William, Virginia

Date of Construction: 1936-1937

Engineer: William P. Glidden

Present Owner: Virginia Department of Transportation
1401 E. Broad Street
Richmond, Virginia 23219

Present Use: Vehicular Bridge

Significance: The Walkerton Bridge, originally known as the Mattaponi River Bridge, is one of a handful of swing-truss crossings remaining in Virginia and an early project conducted by the Virginia Department of Transportation after they assumed control of the county road system in 1932. With the proposed demise of the Great Wicomico River bridge, it will be the last surviving swing bridge in Virginia that was constructed over wooden pilings. Unlike even the Great Wicomico bridge, the Walkerton crossing is a manually operated swing that is not assisted by electrical or mechanical power. The Walkerton Bridge has become a rare artifact, representing a type of bridge technology that once was ubiquitous, but now is on the verge of extinction.

Project Information: This documentation was undertaken in November 1991-January 1992 in accordance with the Memorandum of Agreement between the Virginia Department of Transportation and the Virginia Division of Historic Resources to mitigate the affect of the proposed alterations or replacement of this structure. Historical research was conducted by Charles Downing of the William and Mary Center for Archaeological Research (WMCAR). The photography, physical description, and analysis were produced by Willie Graham, consultant to the WMCAR.

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Historical research for the Walkerton Bridge/Route 629 Phase III project was conducted at the Virginia State Library and Archives in Richmond and the Swem Library at the College of William and Mary in Williamsburg. Primary research was conducted at the Office of the Clerk of the Circuit Court in both King and Queen and King William counties. In addition, an interview was conducted with Mrs. Martha T. Owen, a life-long resident of Walkerton, Virginia. The library and archives of the Virginia Historical Society have been closed to the public since September 1991 and are not scheduled to reopen until early January 1992. Consequently the cartographic and documentary resources of this institution were unavailable for use in the preparation of this report.

The present Walkerton (Route 629) bridge was constructed in 1936, but the history of the Mattaponi River crossing at this location begins in the 17th century. By the middle of the 17th century, the English had driven the native population from the James-York peninsula. In 1644, Opecanough, leader of the three remaining tribes of the once-expansive Powhatan confederation, orchestrated an uprising against the English. These attacks, which comprised the so-called "Massacre of 1644," fell heaviest on the York River settlements. English retribution was swift and merciless (King and Queen County Historical Society [hereinafter K&QHS] 1957:2). In 1646, a treaty was imposed on the Indians in which Necotawance, Opecanough's successor, was forced to acknowledge that he held his "kingdome from the King's Majestie of England." The Indians were also forced to "leave free that tract of land between Yorke river and James river, from the falls of both rivers to Kequotan (now Hampton), to the English to inhabitt." Indians entering English territory could be summarily killed (Billings, ed. 1975:226). At the same time, the English agreed not to settle the lands north of the Pamunkey and York rivers. However, the English demand for new land led to the negation of this portion of the treaty and by 1649 patents could be obtained in what is now King and Queen County (K&QHS 1957:2).

In 1653, Edward Diggs, a member of the Governor's Council, obtained a 2,350-acre grant which included the present site of Walkerton. Diggs apparently abandoned his claim after a few years. A fortified structure called "Mattapony Fort" may have been built on the property as early as the 1650s. In 1665, Thomas Walker obtained Diggs's abandoned claim in what was then Gloucester County (Cox and Weathers 1973:145).

In 1679, the Virginia Assembly ordered the construction of four forts, one at the headwaters of each of Virginia's main rivers: the Potomac, Rappahannock, York, and James. The York River fort was built on the Mattaponi, its northern branch, and appears to have been constructed according to specifications set out in a 1670 Act of Assembly. A 1981 VRCA archaeological survey conducted on the Walker family's Locust Grove property (about one mile north of the Route 629 bridge) resulted in the discovery of the remains of a 22 by 59.5 foot structure. The Act of Assembly stipulated that storehouses in these forts measure 20 by 60 feet. Artifacts recovered at the site (designated 44KQ7/2) indicate that the structure was built and occupied during the last quarter of the 17th century (McCartney and Luccketi 1981).

Thomas Walker had probably not seated his Mattaponi River patent by the time the fort was built. The Assembly charged a nearby landowner, Captain Richard Johnson, with providing the necessary building materials. As many as 80 soldiers may have garrisoned the fort at one point, but the average number was between 20 and 40. The VRCA survey also located the remains of a late 17th-century domestic structure believed to be "Ryefield," the original Walker family seat. The Ryefield site lies only 60 feet from the remains of the Fort Mattaponi storehouse. Both lie very near the Walker family cemetery at Locust Grove (McCartney and Luccketi 1981).

The population of the area that became King and Queen and King William counties grew rapidly in the latter decades of the 17th century. In 1691, the portion of New Kent County lying north of the Pamunkey River became King and Queen (K&QHS 1957:7). By 1699, the new county had a population of 4,306 making it one of the largest in the colony (Morgan 1975:413). In 1701, King and Queen's territory between the Mattaponi and Pamunkey rivers was organized as King William County (Ruritan Club of King William County 1950:43).

Before the end of the 17th century, John Waller established a plantation called Enfield (or Endfield) on the river bank opposite from the Walker patent (Rayburn 1958). By the second quarter of the 18th century (if not earlier), wharves and warehouses were components of both the Walker and Waller plantations. "Waller's" ferry operated regularly between the two points (Hening VI:16,173). By the early 1700s, the Walker wharf and warehouse may have begun to resemble a small town. Early in the century, both John Waller and John Walker purchased town lots presumably to establish commercial bases of operation. In June of 1707, Waller deeded one-half of his lot of land "in Delaware town at West Point" (now the town of West Point) to John Walker. In payment, Walker was to build a house on Waller's portion of the lot (King William County Records, Record Book 1:360). Walker no doubt had intentions of improving his own half of the lot as well.

John Walker seems to have enjoyed a measure of success in his commercial ventures. In 1709, the Virginia Assembly acquired 40 acres of his land and established the town of Walkerton, or "Walker Town" at the site of his warehouse and wharf in King and Queen County (Hening XII:207). On paper the Assembly created many towns during the two decades surrounding the turn of the 17th century. Few succeeded. According to standard practice, after the Assembly legally sanctioned a town the acreage set aside would be divided into lots and then sold by the town "feoffees" or trustees. Deeds of sale were then recorded at the county courthouse. The destruction of King and Queen County's pre-1864 records makes any account of the size and growth of 18th-century Walkerton largely speculative given the few references to the town found in other sources.

In 1731, a tobacco inspection law was enacted by the Virginia Assembly after nearly two decades of sporadic debate and unsuccessful attempts at passage. The final bill was largely the work of Virginia Governor William Gooch. It provided for the "inspection and

bonding at public warehouses of all tobacco shipped abroad, the destruction of all unacceptable tobacco" and the standardization of the size of hogsheads (36 by 48 inches). Receipts from public warehouses were to serve as legal tender (Billings, et al. 1986:236). In 1742, the Assembly certified five warehouses in King and Queen County. The warehouses "at Mantapike, and Walker Town, on the lot of John Walker" were placed under one inspector (Hening V:142). A 1748 enactment referred to the "warehouses" at Walkerton indicating that there was probably more than one (Hening V:437).

There were at least a few other structures at Walkerton in addition to the warehouses and buildings owned by the Walker family. A bill was passed during the 1742 legislative session prohibiting the residents of Walkerton from building wooden chimneys. The same bill sought to prevent the town's residents from "raising and keeping hogs." The author of the 1748 act which repealed the restriction on wooden chimneys explained in the text that the Assembly had been concerned over "the preservation of the public warehouses in this town from the danger of Fire" (Hening V:437,568). Why, in 1748, the legislators were suddenly satisfied that wooden chimneys no longer posed a threat to the Walkerton warehouses is not certain. The number of wooden chimneys and the abundance of hogs in Walkerton may indicate a short-lived boom in the local economy and an accompanying increase in the population of the village.

The earliest mention of Waller's ferry and warehouse is also found in the acts passed by the October 1748 session of the Assembly. The ferry between "Walker Town" and Waller's was to be "constantly kept" and the fare for both men and horses was three and three-quarters pence each way (Hening VI:16). The warehouse "at Waller's Ferry" was to be maintained "under one inspection with the Walkertown warehouse in King and Queen" (Hening VI:176). The ferry crossing apparently was not equipped to transport goods across the river on a regular basis. Despite the fact that the Walker and Waller warehouses were probably only a few hundred yards apart, the Mattaponi was still a significant barrier to trade between King William and King and Queen. It was easier to build two separate warehouses and ferry the inspector back and forth than to consolidate the operation under one roof. During the half to three-quarters of a century in which tobacco cultivation dominated King and Queen's economy, profits would have been relatively high. King and Queen County produced "sweet-scented" tobacco which brought better prices than the more common "oronoco" variety (Grove 1983:17).

Tobacco cultivation in tidewater Virginia declined significantly after the middle of the 18th century. Walkerton's tobacco inspection was "discontinued" between 1761 and 1765 and again between 1769 and 1772 (Hening VIII:78,98,328,508). In 1765, Baylor Walker was the owner of the warehouse lot (Hening VIII:78). In 1770, despite Walkerton's apparent decline as a small tobacco port, the village was prominently displayed on John Henry's map of Virginia (Henry 1770). A nation-wide economic downturn in the aftermath of the Revolution may have also contributed to the apparent decrease in level of commerce at the wharf and warehouses.

In 1785, Walkerton was disincorporated as a town. The Assembly "reverted" the 40-acre tract of land acquired from John Walker 76 years earlier to his heirs. The Assembly attached to the bill a proviso stating that "nothing herein contained shall be construed to affect the right of any person to a lot or part of a lot in the said place, or to discontinue the public road to, or ferry across Mattapony river from the said town" (Hening XII:207). There may have been lot owners other than the Walker family. No mention was made of the tobacco inspection warehouse which presumably had ceased to function by this time. Despite the downturn in the village economy, the river crossing at this location was still seen as vitally important.

Enfield plantation, on the King William side of the bridge, has undergone far fewer changes than Walkerton over the last two centuries. Enfield remained in the Waller family until the early 19th century. In 1814, Carter B. Berkeley of Middlesex County purchased the 1,431-acre tract from the estate of John Waller (KWCR LB 1814). Berkeley never lived at Enfield as his residence was listed as "Middlesex" through much of his ownership and in his final years he lived in Baltimore. A notation in the 1819 land tax book indicates that an "overseer" lived on the property. The buildings were assessed at \$1,500 in 1820 (KWCR LB 1820). Carter Berkeley died in 1828 and left Enfield to his daughter, Elizabeth (KWCR LB 1828). By 1832, Elizabeth Berkeley had married John Cooke of Hanover County and the property was thereafter listed under his name. By the early 1840s, either some of the outbuildings had been destroyed or the entire complex had deteriorated as they fell in value to \$1,000 (KWCR Lbs 1840-1845). Cooke apparently improved the property and by 1845, the buildings were valued at \$2,500 (Lbs 1845-1851). John and Elizabeth Berkeley Cooke lived in Hanover County during the entire period of their marriage.

John Cooke apparently died intestate and the Enfield property was divided. In 1875, John McPherson Cooke was appointed trustee of "100 acres of land including the dwelling house which is called 'Enfield'...for the benefit of Lucy N. Cooke and her children" (KWCR DB 4:133). Over the next quarter-century, John McPherson Cooke, Jr. re-acquired some of the tracts that had been apportioned to the other Cooke heirs. A copy of an 1867 plat re-recorded in 1890 shows the division of the estate (KWCR DB 9:265). It does not appear that the title-holder to the property during the century the Berkeley and Cooke families owned Enfield ever lived there. When John McPherson Cooke, Jr. sold the property he resided in Essex County, Massachusetts. In 1917, John R. Parker of King William paid Cooke \$3,000 for the Enfield house and 339 acres of land (KWCR DB 33:33). Today, Enfield remains the property of the Parker family. Since World War II, the Parkers have operated a retail fuel business from a sizable depot on the property (Owen 1991). It is perhaps significant that the owners of Enfield never sought to establish commercial enterprises in association with those existing at Walkerton. The river still limited the type of access and commercial relationships that existed between residents on the opposing banks of the river.

Like many former tobacco-growing areas in late 18th- and early 19th-century tidewater Virginia, King and Queen's planters and yeoman farmers turned to the cultivation of corn and other grains. By 1773, a grist mill was operating at Walkerton. Baylor Walker of Walkerton employed one Henry Brown to supervise the mill for at least two years between 1773 and 1775 (Cox and Weathers 1973:317). By 1813, the Walkerton mill was owned by Joseph Temple of Chatham Hill. In 1820, the year in which building assessments were first recorded in Virginia county land tax books, Temple's two-acre Walkerton mill tract contained buildings valued at \$590 (King and Queen County Records [hereinafter KQCR] Land Books 1813-1820). In 1824, ownership of the mill was transferred to Baylor Temple, presumably Joseph's son (KQCR LB 1824). In 1839, Baylor Temple took on Thomas Cauthorn as a partner (KQCR LB 1839). Apparently the level of business was such that the mill was expanded and for much of the next three decades it was owned through a succession of partnerships. All of the men who were sole owners or partners in the Walkerton mill were King and Queen County residents. It is not known to what degree, if any, King William farmers availed themselves of the Walkerton mill.

In 1840, the value of the mill buildings increased from \$590 to \$3,000 (KQCR LB 1840). It is not known whether the new mill complex included the pre-existing structure. In 1842, Thomas Cauthorn purchased Baylor Temple's interest in the mill and became the sole owner. In 1846, fire destroyed much of the mill complex and the building assessment was reduced by two-thirds to \$1,000 (KQCR LB 1846). Cauthorn had the damage quickly repaired and the following year \$2,000 was added to the mill's assessment "for improvements" (KQCR LB 1847). Perhaps the cost of rebuilding the mill had sapped Cauthorn's resources or the level of business was insufficient for him to recoup his losses. He sold the mill tract two years later (KQCR LB 1849).

An 1848 plat of Walkerton shows a substantial milling operation on the north side of the village (Anonymous 1848). The plat was made during the settlement of a boundary dispute between A.G. Sale and Thacker Muire. Thomas Cauthorn was the mill owner at the time this plat was made. The surveyor depicted the "Walkerton Mill House" as a three-story building set on the south end of the mill dam. The main road through the village (now Route 629) ran across the top of the mill dam until both were severely damaged by a flood in the 1930s (Owen 1991). The two structures nearest the mill were not identified. The larger of the two may be the Baylor Walker house which later served as the Walkerton Hotel (Cox and Weathers 1973:287-288). The smaller structure lying closest to the mill is probably the "Miller's Cottage" which housed a succession of the Walkerton mill's 19th- and early 20th-century proprietors (Cox and Weathers 1973:318). Both the cottage and the hotel building are still standing and are well maintained. The vacant mill building still stands albeit in significantly poorer condition. The extant mill building was likely constructed directly after the Civil War. It continued to operate (albeit sporadically during its final decades) as a grist mill until the 1930s (Owen 1991).

The boundary shown on the 1848 plat may represent the current path of Route 629 through Walkerton. Both Thacker Muire and Albert Sale appear to have maintained commercial enterprises. Muire had a granary attached to the wharf on the river in front of his house. Sale maintained a wharf as well and also a store on the main road through town. Sale's wharf apparently later became the public landing from which the ferry later operated. It would appear that a part of Muire's business was in warehousing incoming grain and outgoing flour from the mill. He may also have transported flour and grain along the Mattaponi and York rivers. It is known that Muire operated the Walkerton ferry from his wharf for nearly three decades prior to his death in 1863 (Cox and Weathers 1973:383). It is not known whether Muire's ferry was a public concession or whether he operated it for his own profit. If the latter was true it may signify that crossings of the Mattaponi at this point had become more sporadic than during the 18th century. Muire's home, "White Marsh," still stands overlooking the Mattaponi just downriver and within view from the Route 629 bridge. The house and property have been owned by the Mitchell family since the late 19th century (Owen 1991).

In 1849, Thomas Cauthorn sold Walkerton mill to John Bagby. In the same year Cauthorn also sold a 1.25-acre lot near the river to Edward S. Acree and Benjamin Fleet. The two partners constructed a \$1,400 warehouse on the lot and went into business as merchants (KQCR LB 1849). Under Bagby's ownership the mill was improved and in 1851 the value of the buildings jumped to \$5,000 (KQCR LB 1851). It may have been Bagby who first added a saw mill to the operation. In 1854, Bagby took Joseph Ryland on as a partner in the mill business. An 1863 Gilmer map shows two mills at Walkerton, situated on opposite ends of the mill dam (Gilmer 1863). The expansion of Bagby's milling operation and the construction of Acree and Fleet's ample warehouse suggest an upswing in the local economy during the 1850s.

By 1859, Bagby's share in the mill had been leased to Joseph Ryland and Bononi Carlton and the building value had increased to \$6,600. The earliest extant deeds relating to the mill property were recorded in 1866. The Walkerton mill then consisted of

"the mill seat and mill buildings and the machinery and utensils of various descriptions appertaining thereto... the irons and castings and bricks left over from the recent burning of the saw mill...the former mill house, the mill pond and land overflowed thereby and the mill dam and the small piece of land below the dam considered as part of the Mill seat and abutments at each end of the dam and all buildings upon them" (KQCR Deed Book 1:267).

It is not known what caused the fire at Walkerton mills. Given the fact that it occurred during the Civil War, it would appear likely that it was the work of Union cavalry. During the war, Todd's Bridge at Dunkirk, a colonial-period structure which spanned the Mattaponi River, was burned along with a ferry landing and granary. The King and Queen County Courthouse and the small village surrounding it were destroyed by Union cavalry

in 1864. Elsewhere in the county, farms were pillaged and mills burned (Grove 1983:12 and Cox and Weathers 1973:12). Civilian-owned mills were frequently targeted during the Union cavalry's punitive raids throughout the state in 1864. The damage at Walkerton may have been more substantial than the 1866 deed suggested. Between 1859 and 1866, the building assessment on the 2.25-acre lot fell from \$6,600 to \$500 (KQCR Lbs 1859 and 1866).

In May 1866, Joseph Ryland purchased Bononi Carlton's half-interest in the mill for \$1,600 (KQCR DB 1:267). By 1870, the mill had been rebuilt and refurbished to its pre-war capacity and was again valued at \$6,600 (KQCR LB 1870). By 1875, the value of the mill buildings had fallen to \$4,932 and the property was listed under Joseph Ryland's "estate" (KQCR LB 1875). Between 1880 and 1881, the mill lot's improvements fell to \$2,900 under Joseph R. Ryland, presumably the previous owner's son (KQCR LB 1880-1881). In 1882, John A. Fleet purchased an eleven-sixteenths interest in the mill. Fleet was soon its sole owner and he lived in the miller's cottage while he operated the mill (Cox and Weathers 1973:318). The steady decrease in the property's assessed improvements after 1870 may reflect the abandonment of saw milling as part of the operation. Lumber production in post-war Virginia increasingly became the province of large firms. Beginning in the early 1870s, Thomas Newton Walker ran a substantial lumber business in Walkerton. It is not known if he ran a saw mill in the village, but the presence of his office there may have served to direct business to his own firm and away from Walkerton mills. By the turn of the century a number of steam-operated saw mills were employed in the county cutting "lumber, shingles, and laths" (Walker 1906:12). The Denmead Dry Dock Company operated its own saw mill at West Point beginning in 1887 and in 1913, the Chesapeake Pulp and Paper Company established its first plant there (County Council of King William County 1925:24-25). By 1924, there were 25 saw mills operating in King and Queen County (Mundie 1925:31). The grist mill in Walkerton continued to decline in value perhaps because of similar competition from larger flour manufacturing companies in Richmond.

By 1901, the value of the Walkerton mill had slipped to \$1,800. In that same year the land records show that a half-acre tract in Walkerton was designated as the "Grange Hall" and listed under the ownership of "John A. Fleet & others." The tract contained no buildings in 1901 and there is no indication in subsequent records that a Grange building was ever constructed in Walkerton (KQCR LB 1901). The notation in the land book does indicate that Fleet (along with what was presumably a group of local farmers) had attempted to organize a cooperative agricultural organization. Apparently outside competition was making the production of cereal grains less profitable in King and Queen County. The absence of an accessible rail link or paved roads no doubt exacerbated this problem.

In 1860, King and Queen County's economy was, as it is today, almost exclusively agricultural. On the eve of the Civil War, there were 13 milling operations in the county and a few artisans practiced their trades. Three individuals were engaged in grinding

plaster; there were also three wagon and carriage makers, and a shoemaker (Mundie 1925:27). As the Walkerton mill slowly declined during the final quarter of the 19th century, other commercial enterprises began to flourish in the village. The need for a bridge at the Walkerton crossing increased as the village grew in the late 19th century. There are no references to land having been set aside on the river bank as the public landing until the late 1800s.

As noted above, Edward S. Acree and Benjamin Fleet purchased a 1.25-acre lot in Walkerton on which they erected a \$1,400 warehouse in 1849 (KQCR LB 1849). By 1859, Acree was apparently in business alone and the value of the store had fallen to \$900 (KQCR LB 1859). Shortly thereafter Acree formed a partnership with William D. Turner and the two added to their real estate holdings in Walkerton. In 1866, the firm of Turner and Acree owned nine acres in Walkerton with buildings worth \$2,500 (KQCR LB 1866). No information regarding the nature of Turner and Acree's business has come to light. From the value of the buildings they owned, they may have operated a number of ventures from the same location. In 1870, when most of their property was sold to Thomas Newton Walker, Acree and Turner were described simply as "merchants and partners" (KQCR DB 2:351). In all likelihood they sold general merchandise and dry goods to area farm families. Given the nature of the local economy, they may have sold agricultural implements and boating supplies as well. Acree and Turner may have also operated a hotel on the property.

In 1871, Edward S. Acree owned a 1.75-acre lot in Walkerton with \$1,200 in buildings. He may have continued in business by himself or this may simply have been his residence. Thomas Newton Walker on the other hand now owned nine acres with \$3,300 in buildings (KQCR LB 1871). The previous year Walker had purchased "that portion of [Turner and Acree's] property [which was] bounded by the low water mark along the river and extends from the river along the public landing and the public road leading from the ferry up to the corner of the uninclosed lot opposite to the residence of E.S. Acree...supposed to contain about seven acres with the storehouses, dwelling house, and other buildings and improvements thereon" (KQCR DB 2:351). The property comprised most of what might be described today as the "center" of Walkerton. In the late 19th century it included the store and also the Walkerton Hotel (Cox and Weathers 1973:198).

Thomas Newton Walker was the most successful entrepreneur in the Walkerton area during the last quarter of the 19th century. He resided at his family home, Woodville, a 650-acre farm located about 2.5 miles northeast of the village. His primary commercial interest was in selling cord wood. An 1890 deed strongly suggests that Walker's lumber business was operated at Ayletts in King William County about eight miles upriver from Walkerton (KQCR DB 9:475). In addition to owning the old Turner and Acree store and hotel, Walker served as the village postmaster and held a one-half interest in the ferry and landing with John Mitchell (Cox and Weathers 1973:198,383). In 1885, Walker was the sole owner of 12 acres of land in the village with buildings valued at \$2,800. The buildings were located on the old Turner and Acree property. He had also recently acquired Neck Farm,

a 254-acre tract on the north side of Walkerton mill pond (KQCR LB 1885 and DB 5:561). Walker also owned an interest in the Walkerton Wharf Company which owned a wharf, warehouse, and steamboat (KQCR DB 9:377). Presumably the boat was used to carry passengers and haul freight between Walkerton and West Point and perhaps further points down the York River. With his business interests at Ayletts, Walker is the first entrepreneur at Walkerton known to have had business interests on both sides of the Mattaponi.

In 1890, Walker's financial and business interests took a disastrous turn. He lost his store and two steam saw mills at Aylett's, the Walkerton ferry and storehouse, and well over 1,000 acres of land. His property was sold to pay debts. When he conveyed his property to the trustee for sale, he gave up not only his real estate but "all personal property exclusive of what is exempt to him under the poor debtor's exemption" (KQCR DB 9:476). In 1901, Walker owned only a seven-acre tract at Walkerton and a house valued at \$840 (KQCR LB 1901). Ironically, it was the demise of Thomas Newton Walker's budding financial empire which initiated a period of growth in Walkerton around the turn of the century. Walker's property in the village was divided into lots and sold. Apparently streets were laid out at that time and several people built houses on lots purchased from Walker's trustee. A plat was made of Walkerton at this time by one J.W. Smith which regrettably has been lost. A number of local historians have searched in vain for the document at the King and Queen County Courthouse and at state record repositories (Owen 1991). By 1901, there were 16 individually-owned lots in Walkerton which had buildings. Most of the structures appear to have been modest homes (KQCR LB 1901).

In 1904, a group of local investors formed the Walkerton and Mattaponi Bridge Company and purchased riverfront property from the trustees of the Thomas Newton Walker property (KQCR DB 15:339). A wooden draw bridge was built across the Mattaponi shortly thereafter. The bridge was located a few hundred feet upriver from the current span. It consisted of a single lane with a wider segment in the center to allow traffic to pass (Owen 1991). A deed of trust executed in 1914 seems to indicate that the Walkerton and Mattaponi Bridge Company continued to operate the ferry from the public landing (KQCR DB 18:205). The construction of the Walkerton and Mattaponi Bridge proved to be a boon the burgeoning local economy. In the same year that the bridge was built, the Walker property trustees sold the old Acree and Turner warehouse to P.P. Dillard, who already owned land near the village (KQCR DB 13:506). Dillard ran a store on the property for several years afterward. The building, apparently vacant at present, still stands on the west side of Route 629 across from the intersection with County Road 1202.

In 1908, the largest commercial endeavor in Walkerton since perhaps the 18th century was initiated. John B. Stansbury of Baltimore purchased three acres of the old Walker property and began a vegetable canning plant which was a mainstay of Walkerton's economy until 1959 (KQCR DB 15:339). The factory stood only a few feet from the bridge. Initially the Stansbury Canning Company's operations were housed in a building valued at only \$450 (KQCR Lbs 1908-1916). In 1916, the factory was apparently expanded and the

value increased to \$1,500 (KQCR LB 1916). The second floor of the old cannery building was extended out over the river to allow for easier handling of produce and supplies (Owen 1991). Stansbury relied on produce purchased from local farmers in both King and Queen and King William counties. In 1908, he signed an agreement with the bridge company which entitled "employees of the factory, customers, patrons, and growers of produce" to a three-quarter discount on tolls (KQCR DB 15:339). By 1921, the Stansbury Canning Company's facility was valued at \$2,500 and the machinery it housed at \$1,000 (KQCR LB 1921).

In 1911, a group of investors, many of whom were partners in the bridge venture, purchased a tract of land on Peavine Island which lies within clear site and just downriver from the existing Route 629 bridge (Owen 1991). The Mattaponi Pickling Company operated as a "brinery" and employed many local residents. No deed of sale related to the brinery was found in the county records. The Mattaponi Pickling Company occupied only one-half acre of the island and put up a building worth \$1,000 (KQCR Lbs 1911-1925). An 1826 plat shows the then unnamed island was once owned by Baylor Temple (KQCR Plat Book 1823-1878:19). Temple was not charged property tax on the undeveloped island, although the assessor dutifully listed it was under his name for several years. It is not known if the brinery's owners had purchased only one-half acre of the island or if they were required to pay taxes only on the improved portion. In 1926, the Mattaponi Pickling Company was completely destroyed by fire (KQCR LB 1926). The island has remained undeveloped since that time.

In the early 20th century, the Mattaponi River was still the main avenue of commerce in King and Queen County. Walkerton enjoyed a period of unparalleled development and prosperity during the first quarter of the century. By 1920, Walkerton was a village of 90 residents (Mundie 1925:31). In addition to the brinery and canning factory, a branch of a King William County bank opened in the village along with several stores (Owen 1991). At least three hotels operated in Walkerton providing travellers with accommodations while they waited to make connections with the steamboat to West Point or the daily stage to Lester Manor in King William County en route to the rail connection for Richmond (Mundie 1925:15 and Walker 1906:28). Much of the clientele were local businessmen and sales representatives from Richmond-based firms (Owen 1991). The most noted of the old hotels was the Hotel Walker and an adjacent building known as the "Annex". Both buildings still stand on the east side of Route 629 at the latter's intersection with Route 1203. In 1906, the Hotel Walker maintained both a telegraph connection with Western Union and the "office of the Long Distance Telephone Company" (Walker 1906:28).

In 1909, the U.S. Engineer Office prepared a report as part of a proposal for the improvement of the upper Mattaponi River. The report described the Mattaponi drainage area as "about equally cultivated and wooded producing grains, potatoes, vegetables, and fruits on the cultivated portions and pine, oak, hickory, ash, locust, and chestnut on the forested portion" (U.S. Engineer Office 1909:2). Walkerton was included in "Section 2" of

the proposed area to be improved. "Section 2" extended for eight miles from Mantapike to White Bank about one-half mile above Walkerton. The channel depths in this stretch varied from eight to 28 feet. Near Walkerton the channel was about 12 feet deep. The report went on to list the industries within the section noting that there were "a ferry, and a pickle and canning factory, 18 stores, a grist mill, and 11 saw mills in operation." There were 13 river landings "for steamers and vessels" and Walkerton was listed among the "principal eight" of these. The bridge at Walkerton was described as a "highway bridge provided with a draw" (U.S. Engineer Office 1909:5).

In 1923, the Stansbury Canning Company, whose principal office was now located in Richmond, sold its Walkerton plant to Henry P. Taylor for \$10,000 (KQCR DB 22:493). (The late Henry P. Taylor was the father of Mrs. Martha T. Owen, a former deputy clerk of the King and Queen County Circuit Court and life-long Walkerton resident. Mrs. Owen graciously provided much of the information in this segment regarding the last half-century of Walkerton's history). By 1927, Taylor had entered into a partnership with C.C. Caldwell and the canning factory operated under the name of "Taylor and Caldwell." By 1931, the two partners had overseen the construction of a new factory and perhaps the purchase of new machinery. In 1931, the factory building was assessed at \$6,500 and the machinery at \$2,000 (KQCR LB 1931). The 1931 factory building still stands next to the northern terminus of the Route 629 bridge.

Taylor and Caldwell sold their canned peas, beans, and other vegetables under the brand names "Summer Sweet" and "York River." Among their larger customers was the Sanitary Grocery Company which operated a chain of stores in Virginia until they were purchased by Safeway. As far as Mrs. Owen is aware, the Taylor and Caldwell Company sold the first commercially canned black-eyed peas in the state. Operations at Taylor and Caldwell were largely seasonal, although a small year-round staff was employed. During the peak summer months, the factory hired between 150 and 200 workers. Initially, the firm purchased the produce of local farmers. The completion of Route 360 in the late 1920s changed this practice. With faster access to major roads, local farmers began transporting their produce directly to Richmond where they could obtain higher prices than those offered by local middlemen. The firm of Taylor and Caldwell became in effect a small consolidated industry as the owners purchased and leased farm land and raised their own vegetables for canning. Canned goods were taken from the factory and delivered by truck, but the factory received its supplies (empty cans, etc.) by boat via West Point until after World War II (Owen 1991).

In 1930, the company was incorporated. Its property consisted of the factory lot and a 96-acre tract of farm land "on the public road from Walkerton to St. Stephen's Church" (KQCR DB 26:241). In 1929, Taylor and Caldwell had signed a ten-year lease with the Walker family to "cultivate intensively and improve the fertility of" Locust Grove farm, the southern boundary of which ran along the north side of the Walkerton mill pond. The lease

stipulated that "no fields [were to] be allowed to grow up in brush and briars" (KQCR DB 26:28).

In 1936, the current Route 629 bridge was constructed by the Roanoke Iron and Bridge Works under the auspices of what was then the state department of highways (now VDOT). The old bridge had become seriously dilapidated. The highway department obtained the easement from the Walkerton and Mattaponi Bridge Company, presumably for the ferry route rather than the old bridge. No deed of sale was ever recorded (Owen 1991). The terminus of the bridge on the Walkerton side of the river is located on the site of the old public landing. An adjacent lot of land is carried to this day on the county land tax books under the name of the long-defunct Walkerton and Mattaponi Bridge Company. An old wooden bridgekeeper's house was demolished during the construction. The remains of the first bridge may be found just upriver from the former canning factory (Owen 1991). The existence of a toll-free bridge across the Mattaponi virtually eliminated the river as a barrier to transportation and local trade. The construction of the bridge along with the completion of Route 360 apparently upset a delicate balance that allowed Walkerton to develop as small commercial center in the early 20th century. The 1904 single-lane bridge and the ferry allowed for enough local traffic to reach Walkerton to support the two large commercial enterprises (ie. the cannery and brinery) and the smaller businesses. The existence of the hotels suggests that Walkerton was still something of a way station or terminus. The modern bridge and Route 360 removed the river as a barrier and allowed local farmers and consumers to connect with the larger economies of Mechanicsville and Richmond.

Improvements in transportation and communication were a major factor in transforming Walkerton from a small commercial community to a primarily residential one. After Route 360 was completed the bank branch at Walkerton was moved to Ayletts on the new highway. Between 1860 and 1924, the number of grist mills in the county declined from 13 to five (Mundie 1925:31). The Walkerton mill ceased operation in the 1930s. The Taylor and Caldwell factory closed in 1959 (Owen 1991). As highway travel to West Point and Richmond became easier, private and commercial traffic on the Mattaponi lessened. The hotel business in Walkerton disappeared as a result. Walkerton today remains a picturesque village with its turn-of-the-century appearance only slightly modified by the 20th-century.

Erected in 1936-1937 and located in the VDOT Fredericksburg construction district, the Walkerton Bridge carries Route 629 over the Mattaponi River, connecting King and Queen County with King William County, Virginia. The bridge consists of steel beams supporting a concrete deck and is carried by a timber substructure. To allow for boat traffic, a trussed swing span was employed, creating an 156-foot divided opening.

In 1932, the Virginia Department of Transportation (VDOT) assumed control of the maintenance and erection of Virginia's county road system. One of their first projects after

their newly assumed authority was to construct a swing-span structure to transport Route 125 over the Nansemond River in Suffolk (VDHR files 66-164; Pawlett 1991). Swing-span construction had been effectively developed in the 19th century--especially for railway bridges--to such an extent, that by the early 20th century, they became an effective and efficient solution for spanning navigable waterways. At Walkerton, this proved to be a relatively inexpensive bridge replacement type for the crossing of the Mattaponi. Of the more than 20,000 extant bridges and culverts under the auspices of VDOT, a mere 14 are moveable. Ten of these latter bridges are of the swing-span variety with a preponderance located in the VDOT Fredericksburg construction district. The most recent of the VDOT swing-span bridges was erected in 1957. Since that time, nine moveable bridges have been replaced, including two with swing spans. The Army Corps of Engineers maintain two additional swing bridges in Virginia, although they too appear destined for replacement (Mouer: 13,23,33; VDHR files 66-164).

The 677-foot span over the Mattaponi River was designed in March of 1936, with revisions made to the drawings in September of that year. A note "Finals Posted 1-23-37 J[?]. N. H." implies that construction had not been completed--and maybe not even started--by January of 1937 (VDOT:Sheet 1). However, there are three plaques attached to the bridge, all of which designate its date as 1936. At least three delineators were involved in the design stage and they were simply identified by their initials. The bridge engineer was William P. Glidden and the drawings were approved by chief engineer C. S. Mullen.

On both ends of the swing truss a plaque was installed that reads:

VIRGINIA DEPARTMENT
OF HIGHWAYS
CAPACITY 15 TONS
BUILT BY
ROANOKE BRIDGE WORKS
ROANOKE VA
1936

Installed on the guardrail at the north end of the bridge is a third plaque with the text "1936 DEPARTMENT OF HIGHWAYS" surrounding the state seal.

The deck leading to the moveable span is constructed in a series of 30-foot bays. Large, transverse, wide-flange girders carry smaller steel joists perpendicularly set. The tops of both sets of wide flanges are laid flush and carry a reinforced concrete roadbed. Longitudinal edging beams are set on top of the girt system and are thus raised sufficiently above the roadbed to create a form for the curbing. The roadbed consists of reinforced concrete and was poured concurrently with the curbing.

To support the concrete and steel of the fixed spans a system of wood pilings was used for the substructure. Of the ten remaining swing spans under VDOT's purview, only

the Walkerton and Great Wicomico River bridges utilize wood piles and both of these are slated for demolition (Mouer:33). At Walkerton, the pilings were braced with 4" by 6" members bolted in place. Short 10" by 12" ties are set on top of the two central pile pairs, which--along with the two end piles--carries an 8" by 14" transverse girt. The superstructure rests on this top girt. At the two interior ends of the fixed spans the wood bents create a rest for the swing span when it is closed. Four 12" by 12" beams are ganged on top of the piles to act as a bed for a curved track on which the deflected span can be guided as it opens. Beyond, three more beams are stacked to carry the end of the fixed length. All of the wood was originally treated with creosote and the tops of the piles were capped with galvanized flashing. At the outside ends of the bridge concrete abutments support the superstructure as well as retaining the banks of the river.

Swing spans that are symmetrical about their pivot are typically constructed either on the rim-bearing or center-bearing model. Though swing-span bridges are known to have existed as early as the late 16th or early 17th century in Europe, they came into widespread use with steel construction in the United States as railway crossings over navigable rivers and canals. As the design of swing-span construction was refined, the center-bearing model became the preferred model. By World War I swing-span bridge design was the most common moveable crossing used in the United States (Mouer:16, 23-28).

Center-bearing swing spans differ from rim bearing in that the load of the truss is transferred to a single pivot point instead of along a rim. Even so, most commonly a series of wheels run along a circular track, but these help to balance the span and do not carry any real load. In the case of the Walkerton bridge, four wheels are employed for this purpose. John Waddell, the great bridge engineer of the late 19th and early 20th centuries, summed up the advantages of the center-bearing model over rim-bearing design in his book *Economics of Bridgework*.

The choice between [rim-bearing and center bearing swing spans] . . . is mainly a matter of taste or sometimes prejudice; for there is no great difference in their first costs, what there is being in favor of the latter, which also has a slight advantage in respect to amount of power required to operate. In the author's opinion, the principal economic advantage of the center-bearing type is due to the smaller diameter of the pivot pier (Waddell:287).

C. C. Schneider, President of the American Society of Civil Engineers during the early part of the present century, may have been a more pragmatic swing-span engineer than Waddell. He, too, felt

the center-bearing type offers more advantages than the rim-bearing type . . . It requires less power to turn, has smaller

number of moving parts, is less expensive to construct and maintain, involves less accurate construction than the rim-bearing bridge, and does not easily get out of order (Waddell:287).

Actually, Waddell promoted bascule and vertical-lift design in favor of swing spans. Though the latter operation offers the possible advantage of two waterway openings (thus allowing controlled boat traffic in congested areas), Waddell felt that the other two mechanical means of bridge opening far superior. Chief among his complaints about the swing operation is that 1) due to the pivot pier, there is more obstruction to the flow of water. 2) He asserts that swing spans are more costly to maintain. 3) Two to three times the amount of operation time is needed to open this span. 4) In the case of alterations to a bridge, either for enlargement or relocation of the movable span due to shifting channels, a more readily adaptable system is afforded by the vertical-lift design. In spite of Waddell's complaints, swing-span design was quite popular for automobile and railroad bridges prior to 1950, though the center-bearing model seems to have predominated, at least in Virginia (Waddell:285).

Because of relatively low cost to construct and maintain a center-bearing, swing-span bridge, VDOT often utilized this system for its movable crossings between the years of 1930 and 1957. The two major factors effecting the decline in the popularity of swing bridges was the improvement in other designs and the amount of space the pivot pier takes within the navigable portion of the opening (Mouer:27-31).

In the case of both the Walkerton and Great Wicomico bridges, a round concrete pivot pier supports the swing truss. The Walkerton bridge turns on a pivot pinion at its center with additional support given by four steel wheels that suspend from the underside of the span and run on a circular track. Both the pivot pinion and the track is carried by the concrete pier.

The bridge is operated from the moveable portion of the span. Two gates were installed during initial construction--both located on the west side of the structure. These are controlled by levers on the gate-operating platform which extends from the west face of the swing span at its center. These levers engage rods that run along the length of the bridge and mechanically open and shut the gates. A slip connection in the rod accommodates the opening and shutting of the span.

The next stage in the opening process requires that the wedges holding the moveable span tight be withdrawn. This is accomplished by removing a steel plate from the center of the deck and attaching a ratchet to a rack of gears. As the operator turns these gears, two wedges on the pivot pier and one in each of the four corners of the trussed span are dislocated. Additionally, a locking pin centrally located under both ends is raised and deactivated. The second steel plate on the center of the deck is then removed and a larger

rack of gears is manually turned to crank open the bridge. A small, 30 lb. rail bent to the shape of the outer radius of the swing carries the span as it deflects during opening until the far corner reaches the opposite side of the bridge. When closing, a curved bracket guide rides over a roller, pulling the span up and onto this rail. A wheel on the bottom of the locking pin rides into its fixed position and the gate rods reconnect themselves. The wedges are reset, the plates reattached to the surface of the deck, the gates raised, and the job is complete.

A Warren camelback truss was used to accommodate the span about the pivot pier. The vertical posts and alternating diagonal struts were made of wide flanges, while the top and bottom cords and the remaining struts are comprised of channels connected with lacing bars. Connecting the truss together at the top cord level are three wide flanges. These are braced with composite beams consisting of two steel angles connected by stay plates. The deck of the swing portion consists of 5" by 10" creosoted yellow pine that are held in place by iron clips that catch the flanges on the beams below. The two ends of the swing deck is capped by a steel guard, bent to the radius of the swing. To carry the deck, large, transverse, wide-flange girders are fastened to the posts of the truss and carry ten smaller girts in each bay. These latter members are set perpendicular to and flush with the tops of the larger beams.

Virtually all connections on the bridge are made with rivets, occasionally supplanted with bolts, in conjunction with steel angles and gusset plates. The steel for many of the components are labeled as to their source, with "Bethesda", "Phoenix", and "Carnegie H" being the most evident. The curved rail carrying the two ends of the swing is labeled "W. VA. RAIL CO. 30LB".

A smaller span carries traffic beyond a sand-bar island 137'-4" to the north of the main bridge. A comparable structural system was employed in the design of this 67 1/2 feet bridge and it too is marked with a 1936 plaque.

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Site Plan

